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ABSTRACT

This paper discusses the role of resource center teachers in helping students with attention deficit disorder (ADD) successfully make the transition to secondary school. It addresses: (1) characteristics of ADD, including academic underachievement, cognitive fatigue, fine motor dysfunction, lack of self-monitoring skills, poorly developed organization and time management skills, and performance inconsistency; (2) the influence of adolescence and secondary school demands on students with ADD; (3) diagnosis and placement; and (4) remedial strategies for resource center teachers, including monitoring progress, providing prompts and encouragement, promoting use of computers and modification of assignments to address fine motor dysfunction, encouraging self-awareness and self-management, supporting the use of structured organizers, fostering the use of daily notebooks to assist in short and long-term planning, prompting students to use compensatory skills, persuading students to request assistance and clarification, teaching mnemonic devices, advocating the use of study skills techniques, maintaining close supervision and providing direct instruction, coaching self-advocacy skill development, and recommending and facilitating involvement in extra-curricular activities. (Contains 26 references.) (CR)

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Facilitating and Promoting Academic and Social Success for the Adolescent with Attention Deficit Disorder

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Running Head: ADOLESCENTS WITH ATTENTION DEFICIT DISORDER

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Abstract

Transition to the secondary schooi level can be very stressful, particularly for adolescents with Attention Deficit Disorder (ADD). Students with ADD are legally eligible to receive reasonable accommodations and modifications under IDEA or Section 504 of the Rehabilitation Act. Support staff members responsible for insuring that these students' programs and support services are appropriate are often resource center teachers. In order to provide for these students' academic and social needs, resource center teachers function as advocates with administration and school staff. They need to know the characteristics of youngsters with ADD, their rights under the law, appropriate interventions and accommodations for these students in developing metacognitive, compensatory and self-advocacy skills. In their role as the knowledgeable, supportive contact person, they function as a facilitators who empower these adolescents to become productive, competent and well-adjusted individuals. This article address these issues and identifies specific methods and materials to guide support staff in providing positive high school experiences for these adolescents.

Facilitating and Promoting Academic and Social Success for the Adolescent with Attention Deficit Disorder

Attention deficits represent the most common developmental problem in school aged children (Coleman & Levine, 1988). Epidemiological studies indicate that from 3 to 5% of children in the United States can be diagnosed with Attention Deficit Disorder (ADD). In a typical general education classroom of twenty children, approximately one child will have ADD (Barkley, 1990). Although it was once thought that this disorder would be "outgrown" as the child matured, it is now recognized that ADD is common throughout one's lifespan (Barkley, Fischer, Edelbrock & Smallish, 1990). As these affected students mature into adolescence, problems may worsen amid the strenuous challenges of secondary education when academic, behavioral and social demands increase and support systems provided in the earlier grades decrease. Specifically designated school personnel, often members of the basic skills, guidance or special education staff, are assigned to monitor and support students with ADD. They play a key role in major aspects of students' academic, social and emotional adjustment. In this article, support staff members responsible for the enactment of a wide range of educational interventions within the high school setting will be referred to as resource center teachers.

Teachers, administrators and support staff need to be familiar not only with the diagnostic criteria for ADD but with specific methods of intervention. Adolescents diagnosed with ADD need supportive services, which may include classroom modifications, advocacy and/or directed guidance. How teachers define and fulfill their role in relation to students with ADD greatly affects the nature and quality of students' education. The manner and extent to which teachers deal with adolescents with ADD will have a profound influence on the extent to which these students will become productive learners and confident, successful students.

Pre-existing characteristics may be exacerbated by the complexities of the teenage years, the drive for autonomy, increasing academic demands at the secondary level, peer influences and a changing social climate. Adolescents with ADD present as typical students on the surface and, in most ways, are typical students. The difference is frequently noted in subtle but significant ways that affect their academic and social adjustment in the school setting. These teenagers typically have the intellectual capability to function satisfactorily in secondary level academic programs and since they do not exhibit a specific learning disability or are not classified as such, school personnel often do not realize that these students have direct and specific needs. ADD has been

associated with academic problems and as many as 80% of the children with this disorder have learning difficulties (Frick & Lahey, 1991; Cantwell & Baker, 1991). They are particularly at risk for academic underachievement and have higher drop out rates (Barkley et al. 1990).

Secondary level students with ADD are frequently mainstreamed for all or most academic and related arts subjects, such as, art, music and physical education. Although intellectually capable of success in regular education, they are frequently at high risk for failure in their classes due to problems associated with ADD. These students, who should be challenged academically and placed in the least restrictive environment, need to be accurately diagnosed and provided with appropriate supportive services.

Diagnosis and Placement

School districts have various policies for dealing with students with ADD. Students suspected of having ADD need to be closely monitored and evaluated both medically and educationally to ascertain whether medical/health factors or a specific learning disability are causing or contributing to their ADD symptoms.

Once the diagnosis of ADD is made, the school must provide appropriate services for these students. Prior to 1991, students with ADD were not eligible to

receive special education services unless they qualified under an existing classification category (e.g., emotionally disturbed or learning disabled). They received minimal accommodations in the regular education program. On September 16, 1991, the United States Department of Education clarified that children with ADD may receive special education services in one of three ways. First, students with both ADD and another disability (e.g., learning disability) could qualify for special education services under one of the existing disabilities categories defined in Part B of the Individuals with Disabilities Education Act (IDEA) of 1990. Second, special education eligibility could be identified under the "Other Health Impaired" category of Part B. This includes chronic or acute impairments that result in limited alertness which adversely affects educational performance (Fourteen Annual Report, 1992). Third, if students' needs could be met with special adaptations to the regular curriculum and classroom, they may require a "504 plan", an individualized, written document based on the Civil Rights Rehabilitation Act of 1973 which protects the rights of "individuals with handicaps in one or more major life activities, walking, seeing, hearing, speaking, breathing, learning, working, caring for oneself and performing manual tasks" (Federal Register, 1977).

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In order to ensure that the special needs of students with ADD are met, resource center teachers are frequently designated as the support people or specialists who monitor progress and provide study skill support and remedial instruction. The influence and assistance provided by these teachers are critical to the academic, emotional and social success of students with ADD. Wise use of the time spent with the resource center teacher is crucial for students' success. It ensures many opportunities for promoting long-term independence. When students receive the very specialized attention and support they need, they are more successful in dealing with the rigorous demands of the high school curriculum and procedural expectations and subsequently view themselves as being capable of meeting the challenges they encounter.

It is also important that resource center teachers be aware of specific characteristics and common problems associated with ADD. They need to be perceptive, sensitive and tenacious when dealing with these students and the other staff members who interact with them. Resource center teachers need to have a good understanding not only of normal adolescent developmental and psychological issues associated with this age group but they need to be very

familiar with the symptomology, learning and behavioral issues characteristic of this disorder and knowledgeable about specific remedial techniques and appropriate classroom interventions. Resource center teachers must be sensitive to the difficulties experienced by these adolescents so they can deal with these issues, be supportive of students' feelings, needs and rights, be aware of techniques to ameliorate problem areas and be able to communicate effectively with mainstreamed teachers, administration and parents on students' behalf.

ADD Characteristics

Academic underachievement is the most frequently encountered symptom of impairment associated with ADD (Barkley, 1990). While in the elementary school, students may have been able to compensate effectively using their highly developed verbal skills, conceptual ability and creativity. Yet, as students advance to the secondary level, they tend to become overwhelmed by the increased work load, the demand for focus and detail and the need for organized planning and self monitoring required to maintain academic success. Students who demonstrate strength in particular areas of information processing may have difficulty coping with particular academic tasks due to deficiencies in visual/spatial skills, temporal/sequential organization, language processing or higher level reasoning.

Pupils with ADD commonly have to deal with the effects of uneven development which interferes with their work efficiency and is manifested by areas of particular strength, such as advanced conceptual or language skills and other areas which lag behind, such as poor organization and planning, faulty recall of facts or imprecise comprehension of directions. An example of this would be students who have creative, innovative ideas but their poor planning and misinterpretation of directions result in failing grades for a satisfactory project which was late, off-topic or incorrect due to their failure to follow specific directions. These students tend to have inconsistent attention patterns and may register and consolidate nonsalient data in their memory. Therefore, they have difficulty determining what is relevant when reading a text or studying for a test. Information may be stored or consolidated in a rather tenuous manner. While these students may have excellent recall of nonsalient information (such as trivia) and a highly developed episodic memory (recall of details associated with life events), they tend to have an impulsive learning style and a divergent approach to memory-related tasks. They roam around their storehouse of knowledge and talk creatively about all that they find rather than employ a convergent approach and respond to a direct question with a direct answer. These memory problems interfere with efficient academic learning and prove to be

ineffective and nonproductive at a time when course work requires rapid, convergent retrieval of facts. Typically, classes which stress cumulative and precise memory, such as foreign language, math and science can be more problematic than classes, such as English and social studies, which tend to require less working memory (Coleman et al. 1988).

Another characteristic common to adolescents with ADD is cognitive fatigue. They seem to tire easily and become "bored" with tasks. This burn-out may contribute to task impersistence. Particular difficulty is noted when adolescents are expected to engage in sustained passive listening, common in many high school classes where lecture is the teaching mode. In these situations, affected teenagers may appear to be daydreaming, to be "off in space" or may become overactive or fidgety in an attempt to arouse themselves, through finger movements, foot tapping or various body movements (Coleman et al. 1988).

Many adolescents with ADD experience fine motor dysfunction, specifically, with the motor aspects of writing (dysgraphia) which seems to be due to central nervous system disorganization. These adolescents frequently have difficulty with legibility (Barkley, 1990). Another reason for these handwriting problems may be due to their frenetic, impulsive approach to writing which seems to be a result of

tempo problems. They also may have poor motor planning and difficulty with precise retrieval of letter formation (Barkley, DuPaul, & McMurray, 1990; Szatmari, Offord, & Boyle, 1989).

Adolescents with ADD who do not exercise quality control and self monitoring skills tend to be ineffective. They are often haphazard in their proofreading skills and make careless errors which result in an unreliable indication of their mastery of material. Generally, they lack insight, are excessively motivation-dependent and have difficulty concentrating at moderate to low motivation levels. Unless the subject matter is of high interest to students, they tend to have difficulty maintaining attention to detail, being persistent and reflective. Their ability to self monitor begins to deteriorate at a time when academic subjects require increased self-discipline. They have difficulty dealing with the more tedious demands of secondary level material and their ability to delay gratification is limited (Barkley, 1990; Barkley, Grodzinsky, & DuPaul, 1992).

Organization and time management skills are poorly developed. These students tend to have difficulty preparing and completing long term assignments, utilizing effective study skills and adhering to regular study hours. These problems stem from chronic cognitive impulsivity and failure to plan and reflect prior to

engaging in tasks. They tend to attack tasks hastily, rather than take the time to plan before executing a task. They become preoccupied with completing the task rapidly (Zentall, 1988).

Performance inconsistency tends to be a chronic problem characterized by fluctuations in learning, behavior and mood patterns. This inconsistency can be confusing and frustrating for students, parents, teachers and administrators. Students may be able to work at an above average level one day but function below average the next. An example of this would be students who focus their effort on the two subjects which they failed one marking period. While they manage to raise the grades in these two subjects, they fail three others. These students have difficulty maintaining a balance of effort or consistently applying effort across the board. The students' attention tends to be situational rather than pervasive and this affects their day-to-day and subject-to-subject performance. They are impersistant, have difficulty remaining on task with sufficient intensity and lack the endurance to complete and sustain the quality of tasks that they begin (Barkley et al. 1990; Barkley, 1990). As the high school curriculum expands and the workload increases, these students tend to become overwhelmed. They "shut down" and cannot maintain the capacity to sustain effort during extended work

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periods. They become easily distracted by the array of stimuli in their immediate environment as they are frequently unable to ascertain what is salient or relevant and spend their time and energy on material that is secondary. They may be sensorially distractible and focus on irrelevant visual or auditory stimuli and/or socially distractible and become preoccupied with the activities and appearances of their peers. They tend to be more successful in classes which stress generalizations and broad-based ideas but have difficulty with course work or assignments which require assimilation of precise detail.

Adolescents with ADD, as all teenagers, are struggling to attain their independence yet their specific learning problems often thwart their efforts. At a time when peers are able to juggle the active social and athletic components of their lives with the academic demands of high school, these students require structured support to maintain this balancing act.

(Insert Table 1)

The Role of Resource Center Teachers

Resource center teachers need to monitor progress and function as students' advocates while helping them develop compensatory, self-help and self monitoring skills. Resource center teachers must take a proactive role to ensure that the lines

of communication remain open. Frequently, regular education teachers are unfamiliar with the characteristics of ADD and therefore, may mistake students' inconsistency, inattentiveness and performance problems for apathy or lack of ability. When the teaching staff and administration have an understanding of this disorder, they tend to be more empathetic, realistic and willing to cooperate.

It is necessary to insure that these students are working to the best of their abilities. A weekly review is important to insure that if an assignment is missing, incomplete or of poor quality, resource center teachers and students can review class requirements and plan how assignments can be structured for better organization and timely completion. It is important for regular education teachers to understand that students with ADD frequently have difficulty with long and short term planning, scheduling activities and organizing materials. They need assistance in efficient planning and may require prompts and encouragement to develop and maintain a work-study schedule and assignment pad.

Resource center teachers need to take a proactive stance and provide close supervision and direct instruction (Gleason, Colvin, & Archer, 1991). Typically, resource center teachers will ask students if they need help or suggest that they study for a test or work on a long term project. Although this might seem like they

are providing sufficient support and guidance, students with ADD frequently require more direct intervention. Teachers should not make assumptions that these students are on-task or on-schedule. Frequent monitoring and close communication with regular education teachers are imperative to insure that these pupils do not fall behind. Adolescents with ADD may think that they have grasped a concept or skill, but when required to demonstrate mastery, it becomes evident that their understanding is vague or incomplete. By requiring students to demonstrate or explain what they have learned or to paraphrase directions, resource center teachers can ascertain whether students have a thorough and accurate understanding of the task.

Frequently, in an attempt to foster independence and self-help, resource center teachers will encourage students to request assistance from their regular education teachers. Although this is a necessary step in developing competency and confidence, it is important to ascertain whether these students are able to clearly articulate their needs or that regular education teachers know how to use directive questioning or task analysis to determine where the break-down of information processing is occurring. Students with ADD tend to misunderstand or misinterpret specific information, have difficulty with sequencing information and have poor

working memories. They know that the material presented seems to be vague but they can not ascertain why it is unclear, where the break-down of communication begins nor are they able to clarify concept or skill deficits. Resource center teachers need to use and help students understand the process of task analysis to determine where problems lie. Once students learn to identify the kind of assistance or clarification they need, they must develop skill in clearly articulating these needs. Resource center teachers can use techniques, such as role play or verbal rehearsal to help students become more proficient in asking for and getting the directed help they need.

It is important that these students develop self advocacy skills. In the younger grades, parents and teachers acted as advocates but it is important that, as students mature, they develop the ability and confidence to speak out in their own behalf. This may not be an easy task and can be complicated by several factors. (1) Students with ADD tend to be poor at constructive communication. They may have trouble asking questions and soliciting information needed to accurately complete assignments. (2) Teachers may misunderstand or be resistant to adjust to the needs of adolescents with ADD. The characteristic problems associated with ADD tend to be subtle and many teachers are not familiar with these

characteristics, appropriate classroom modifications or students' legal and ethical rights to reasonable accommodations. Teachers may be reluctant to adjust their programs to make needed modifications or they may lack understanding and empathy regarding the problems experienced by students with ADD. Some teachers are resistive to change because a) they do not understand this disorder, b) they have not been trained in modification techniques and are hesitant, resistant or anxious about making adjustments in their standard procedures and, c) they may feel that it would not be fair to the rest of the class for students with ADD to have these special adjustments. It is imperative that these teachers receive inservice dealing with instructional strategies and/or environmental modifications and, if necessary, sensitivity training. They need to understand that these students do have special needs and that just because their disability is not overt, they have as much right to reasonable accommodations as children who are physically disabled, visually impaired, etc.. They need to know that these students have rights under the law and if teachers do not provide reasonable accommodations they could be held legally accountable. (3) These students tend to have low self esteem. "Underachievement", "inconsistent performance", "lack of motivation", "apathy" are terms that are frequently bantered about when describing these students.

Frequently, ADD is not diagnosed until students reach pre-adolescence or adolescence, after they have endured years of ridicule, blame, criticism, punishment, self-doubt, and self-deprecation.

In an effort to assist students in coping with academic demands, resource center teachers should promote and encourage self-awareness and management. As students mature, they become more reflective and cognitively able to deal with abstractions. They are able to think more objectively and benefit from meta-cognitive strategies (Fowler, 1992) but need direct instruction in the development of self-management skills. Resource center teachers need to work with these students in developing strategies incorporating self-monitoring, self-reinforcement and/or self-instruction (Barkley, 1989). In recent years, self-management interventions have become increasingly popular (Shapiro & Cole, 1994).

Study skill techniques and test taking strategies need to be a focal point of resource center instruction. These students need to acquire learning strategies and compensatory methods that will help them deal with the increasing amounts and complexity of academic classwork. Resource center teachers must assist students in developing a general study routine. This requires a relatively

complex set of activities involving planning, organization, implementation and monitoring. Study routines and planning should be taught and stressed to automaticity (Gelzheiser, Solar, Shepard, & Wozniak, 1983). Supportive devices, such as computers, calculators, spell and grammar checks and tape recorders are commonly recommended for use. Also, computer simulation can be used to promote understanding and reasoning (Woodward, Carnine, & Gersten, 1988; Collins & Carnine, 1988) and secondary teachers report positive results from and acceptance of videodisc instruction (Woodward & Gersten, 1992) . Instructional strategies, such as, mnemonic devices are useful for improving memory. Eggen and Kauchak (1992) stated that mnemonics "aid encoding by forming associations that do not exist naturally in the context" (p.342). Mnemonics are used to recode, transform, or elaborate information by adding meaningful connections to seemingly unconnected information. There is a growing body of research which supports the use of mnemonic techniques in helping students create meaningful links between new and existing information (Carney, Levin, & Levin, 1993). Acquisition outlines, structured organizers, semantic maps, webs and matrices can be used to help students recognize and focus on main ideas, sequence information, place information in a hierarchy and

ultimately, provide methods of retaining information more effectively and efficiently (Schumm & Strickler, 1993). Test taking is used for the purpose of demonstrating knowledge yet test performance depends not only on how well students study but on how "test-wise" they become. Test wiseness can be seen as a set of cognitive abilities, skills, or strategies that can be applied to a variety of tests regardless of their content (Hughes, 1987). Resource center teachers can help students learn to make use of cues and apply deductive reasoning strategies to the test taking process.

Resource center teachers need to oversee many technical issues such as making sure that students' specific educational plans are comprehensive and accurate, whether it be the Individual Education Plan (I.E.P.) used for classified students with ADD or the 504 Plan used for non-classified students with ADD. Since these students are mainstreamed and typically follow regular procedures for most school activities, administration oversights can occur. Unfortunately, these oversights, which might seem to be minor inconveniences, can have very negative effects on students who need these modifications. For example, when students with ADD take group standardized tests, such as the High School Proficiency Test (HSPT), and are not allowed extended test time or administration

in a small group situation as they often require, test results may be inaccurate and may effect class placement, whether students receive remedial instruction and ultimately whether they graduate. Students with ADD may need to be tested in a more solitary setting to minimize distractions. They often benefit from individualized rather than group administration, the use of calculators and/or computers and untimed or extended time testing as they frequently have difficulty understanding directions, retrieving information and writing responses legibly. Many tend to have test anxiety and do not function well when stressed. They may need a change in response format as they may become distracted and off-task when required to transfer test answers to scantron sheets. A change in test format may be required as they may have difficulty expressing themselves well in essay format or may need longer tests split into smaller segments. Test results may not truly reflect students' abilities unless someone is closely monitoring the process to insure that these conditions are followed. Poor test scores can be devastating to the sensitive adolescent and result in a negative self-fulfilling prophecy which can reinforce low self esteem and feelings of inferiority, compound test anxiety and ultimately, perpetuate the failure cycle.

Resource center teachers should also be actively involved in the scheduling

process. They need to make sure that the course work load is appropriate and manageable, that the time schedule of courses is adjusted so that students do not have a load of several intense and demanding courses back-to-back. It is also important that the time spent with resource center teachers is strategically planned so that these meeting occur at the most productive times. Often it is necessary to schedule an early morning conference session in order for students to plan and focus for the day. It may be necessary to reconvene again at the end of the school day so that resource center teachers can help students organize and review assignments, make sure that they have necessary texts and supplemental materials, plan for study and schedule long-term projects. It is also helpful for resource center teachers to have input in scheduling courses and in the selection of teachers, with a focus on class size and teachers' demand for sustained attention and their willingness or ability to make instructional, curricular and/or environmental modifications. Teachers are most commonly cited as the reason for a positive or negative school experience (Fowler, 1992).

Involvement in extra-curricular activities is an important component in high school life. Resource center teachers or other designated staff members should act as mentors to these students to help them acclimate socially. Adolescents with

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ADD frequently have difficulty interpreting social cues and judging their role in social situations accurately. These teenagers often have difficulty with social interaction as they may lack social insight and have difficulty gauging or perceiving socially appropriate behavior. They can be rather impulsive and appear to be thoughtless or overspontaneous in their responses and interactions. Many are more timid, anxious or fearful of personal rejection and therefore, are reluctant to socially interact with their peers, preferring the security of social isolation. They may need direct intervention and support to begin making appropriate social contact. These students may benefit from social skills training which focuses on entry into a group activity and/or training in conversational skills. Resource center teachers may need to instruct, model, coach and provide feedback in the practice of verbal and nonverbal skills crucial for social interactions (Guevremont, 1990). Although these students may express an interest in becoming involved in extra-curricular activities, they frequently have difficulty taking the initiative and may benefit from guided direction and from having a supportive and understanding peer who can help ease the transition into such activities. Often, these young people miss deadlines for admission into school clubs and sports activities because they either do not focus on or remember the announced meeting dates and times. Resource center teachers can

help by discussing the available after school activities with the students early in the school year, by getting a written copy of the daily announcements of scheduled activities for these students and, if needed, by finding a peer with similar interests who can accompany them to extra-curricular activities.

It has been said that a recognizable disability, such as ADD, only becomes a handicap in a nonaccommodating environment (Kameenui & Simmons, 1990; Shinn, 1989). By law, these students should have reasonable accommodations in the school setting, such as matching instructional materials with current academic skills, providing more frequent positive and corrective feedback, enhancing motivation to engage in academic work and increasing opportunities to practice newly acquired skills and knowledge (Reschly, 1988). Resource center teachers, through patient and persistent guidance, support and encouragement can be instrumental in promoting self advocacy, confidence, awareness and coping skills in adolescents with ADD.

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Table 1

ADD Characteristics	Remedial Strategies Used by Resource Center Teachers
Academic underachievement	Monitor progress, assist in planning and scheduling courses/ maintain communication with other teachers
Cognitive fatigue	Provide prompts, cues, encouragement/teach metacognitive strategies
Fine motor dysfunction	Promote use of computers, calculators/modify assignments
Poor quality control	Encourage self-awareness and self-management
Disorganization	Support use of acquisition outlines, structured organizers, semantic maps
Time management problems	Foster use of daily notebook/assist in short and long-term planning
Performance inconsistency	Prompt student to use compensatory, self-help, self-monitoring skills
Problem understanding directions	Persuade student to request assistance, clarification/oversee implementation of instructional/test modifications
Difficulty sequencing information	Teach mnemonic devices
Poor working memory	Advocate the use of study skill techniques/ test taking strategies
Inconsistent attention patterns	Maintain close supervision/provide direct instruction
Difficulty expressing needs	Coach self advocacy skill development through role play, verbal rehearsal
Social adjustment problems	Recommend and facilitate involvement in extra-curricular activities

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